

REMARKS

This Response, submitted in reply to the Office Action dated April 24, 2007, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 1-23 are all the claims pending in the application. Claims 17-22 have been withdrawn from consideration.

I. Claim Rejections under 35 U.S.C. § 103

Claims 1-16 and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hashimoto (U.S. Patent No. 7,001,797) in view of Shimoda et al. (U.S. Patent No. 6,887,650).

Claim 1 recites “adhering a transfer member, to which the adhesive is applied, to the plurality of spacers formed on the transparent substrate.” The Examiner asserts that spacer 44 of cover 40, as illustrated in Fig. 4 of Hashimoto, teaches the claimed spacer.

Hashimoto is directed to the attachment of covers to a substrate on which are formed a plurality of optical elements. See abstract. Hashimoto discloses a cover 40 which includes a plate 42 and a spacer 44 which are constructed as separate members. The plate 42 and the spacer 44 may be joined with adhesive. See Hashimoto col. 5, lines 23-29.

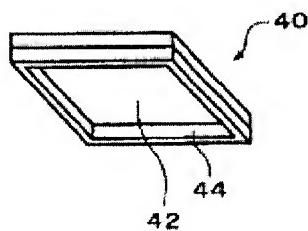


Fig. 4 of Hashimoto

The Examiner concedes that Hashimoto does not disclose adhering a transfer member, to which the adhesive is applied, to the plurality of spacers formed on the transparent substrate and cites Shimoda to cure the deficiency.

However, contrary to the Examiner's assertions, Shimoda is not at all directed to spacers. Specifically, at no point are spacers as claimed disclosed throughout the specification of Shimoda. Shimoda discloses the adhesion of a transferred body 2a to a transfer destination substrate 3a. A plurality of transferred bodies 2a are formed on a transfer origin substrate 1. Energy is applied to partial regions corresponding to the transferred body 2a so as to transfer the transferred body 2a corresponding to the partial regions onto a transfer destination substrate 3a. See col. 13, lines 39-46. The transferred bodies are formed on a light-transmitting heat-resistant transfer original substrate 1 via a peeling layer in which peeling occurs if energy is applied. See col. 13, lines 46-55. Further, as discussed in col. 3, lines 20-30, "transferred bodies" refers to TFTs, diodes, resistors, inductors, capacitors, and other single devices that may be either active or passive, circuits (chips) such as integrated circuits in which devices are integrated and wired together so as to achieve a specific function, circuit parts comprising a combination of a plurality of devices, and whole apparatuses or apparatus parts that are constituted by combining one or more circuits such as integrated circuits so as to achieve a specific function."

Therefore, Shimoda at most discloses the transfer of transferred bodies 2a to a transfer destination substrate 3a via a peeling layer. However, at no point would the peeling layer (transfer member as cited by the Examiner) be adhered to the spacers of Hashimoto. Specifically, if the peeling layer of Shimoda were applied to the spacer of Hashimoto, this would

appear to result in the placement of the transferred bodies 2a onto the plate 42 of the cover 40 of Hashimoto. As discussed in col. 14, lines 7-11 of Shimoda, by applying energy to the region of the peeling layer where the transferred body 2a is formed, transfer occurs in which only the transferred body 2a to which the energy has been applied is joined onto the transfer destination substrate 3. Therefore, the application of the peeling layer to Hashimoto would not teach adhering a transfer member, to which the adhesive is applied.

Further, it appears that the peeling layer of Shimoda would not adhere to a spacer. As disclosed in col. 17, lines 40-59 of Shimoda:

The peeling layer 11 has the property of absorbing irradiated light, whereby peeling occurs within the layer and/or at the interface thereof (referred to as 'in-layer peeling' and 'interfacial peeling' respectively); preferably, the peeling layer 11 is such that the bonding strength between atoms or molecules of the material that constitutes the peeling layer 11 is lost or reduced upon irradiation with light, i.e. ablation occurs, leading to in-layer peeling and/or interfacial peeling.

Furthermore, it may be the case that a gas is discharged from the peeling layer 11 upon irradiation with light, whereupon a separation effect is realized. That is, it may be the case that a component that was contained in the peeling layer 11 turns into a gas and is discharged, or the case that the peeling layer 11 absorbs light and turns into a gas instantaneously, and this vapor is discharged, contributing to separation. Examples of the constitution of the peeling layer 11 include the following A to E.

Therefore, it appears that the application of the peeling layer to a spacer of Hashimoto would merely result in the peeling layer turning into a gas which is consequently discharged. Therefore, the combination of the peeling layer of Shimoda with the spacer of Hashimoto would not teach adhering a transfer member, to which the adhesive is applied, to the plurality of spacers formed on the transparent substrate, as claimed.

Claim 1 further recites "applying pressure to the transparent substrate and the transfer member, which is adhered to the plurality of spacers formed on the transparent substrate." The

Examiner asserts that Fig. 1A and col. 5, lines 35-39 of Hashimoto teaches this aspect of the claim. The respective column and lines cited by the Examiner discloses that the plurality of covers 30 can be applied to a sheet 36 so that a plurality of covers are held in fixed relative positions. However, there is no teaching or suggestion of applying pressure to the cover 30.

Claim 1 further recites “releasing the transfer member from the transparent substrate to transfer the adhesive, which is applied to the transfer member, from the transfer member onto the plurality of spacers formed on the transparent substrate.” However, there is no teaching as to how the adhesive, which is not shown in the figures of Hashimoto, are applied to the cover.

Contrary to the Examiner’s assertions, the use of the peeling layer of Shimoda does not have an equivalent function of bonding two surfaces with an adhesive. Specifically since the peeling layer (transfer member as cited by the Examiner) of Shimoda is not directed to bonding two substrates together as suggested by the Examiner.

Further, there is no teaching or suggestion of releasing the peeling layer (transfer member as cited by the Examiner) from a transparent substrate to transfer an adhesive. Specifically, there is no transfer of an adhesive when using the peeling layer of Shimoda. Shimoda is directed to the transfer of a transfer body, such as TFTs, diodes, resistors, inductors, and capacitors, and does not teach the transfer of an adhesive. Therefore, assuming Shimoda were combined with Hashimoto, this would appear to result in the transfer of a transfer body on the spacer of Hashimoto. At no point is there any teaching or suggestion of transferring an adhesive from the transfer member onto the plurality of spacers.

Shimoda transfers electric components such as a TFT or a diode but not an adhesive as pointed out above. Thus, Shimoda belongs to a *different* technical field entirely than that of the present invention and Shimoda is therefore inappropriately cited in the Office Action. Although the Examiner is merely citing the peeling layer of Shimoda, the peeling layer of Shimoda does not transfer an adhesive.

Further, Applicant submits that Shimoda's teaching of separating transferred bodies from a transfer substrate by selective exposure of radiation to avoid dicing would not have *any* application to Hashimoto's teaching of manufacturing optical devices, in which a optical lenses are cut apart and diced.

For at least the above reasons, the combination of Shimoda with Hashimoto does not teach the elements of claim 1. Consequently, claim 1 and its dependent claims should be deemed allowable.

Claim 6

Claim 6 recites "wherein the transfer member is peeled off such that the angle between the transfer member and the transparent substrate is kept constant." As discussed above, the peeling layer (transfer member as cited by the Examiner) is such that the bonding strength between atoms or molecules of the material that constitutes the peeling layer 11 is lost or reduced upon irradiation with light, i.e. ablation occurs, leading to in-layer peeling and/or interfacial peeling. Therefore, the peeling layer of Hashimoto is peeled by light irradiation. There is no teaching or suggestion of peeling off the peeling layer so that an angle between the transfer

member and the transparent substrate is kept constant. Specifically since there is no angle of peeling disclosed in Hashitomo. Consequently, claim 6 should be deemed allowable.

Claim 7

Claim 7 recites “forming a ridge pattern or a recess pattern in the transfer member, the ridge pattern or the recess pattern being the same pattern as the spacers in the transparent substrate. There is no teaching or suggestion of forming a ridge pattern or a recess pattern in the peeling layer of Shimoda. Further, it would appear that if a ridge pattern or recess pattern were to exist in the peeling layer of Hashimoto, this would result in a defective transfer of the transfer body 2a as taught in Hashimoto, evidencing that the Examiner’s reasoning is merely a result of impermissible hindsight.

Claim 12

Claim 12 recites “wherein the adhesive is applied to the transfer member by bar coating, blade coating or spin coating.” Assuming Shimoda could be combined with Hashimoto and further assuming that the transfer member of Shimoda applied an adhesive, it would appear that the peeling layer would be applied through the irradiation of light. There is no teaching or suggestion of bar coating, blade coating or spin coating, as claimed. Consequently, claim 12 should be deemed allowable.

Claim 15

Claim 15 recites “wherein the adhesive has the thickness from 0.5 μm to 5.0 μm after the adhesive is activated.” However, Applicant submits that Hashimoto does not even illustrate the

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adhesive, let alone describe the thickness of the adhesive. Therefore, it is unlikely that one of skill in the art upon viewing the Hashimoto reference would determine that the thickness of the adhesive is 0.5 μ m to 5.0 μ m after the adhesive is activated. The Examiner's reasoning is clearly a result of impermissible hindsight.

II. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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